

REMARKS

Claims 68-84 are pending. No new matter has been added by way of the present submission. For instance, new claim 84 has been added as supported by the originally filed specification. Thus, no new matter has been added.

In the outstanding Office Action the Examiner asserts that the application contains groups of inventions which are not so linked as to form a single general inventive concept pursuant to PCT Rule 13.1. Thus, the Examiner requires that Applicants elect one of the following three groups:

Group I, claims 68-77, 79, 80 and 81, drawn to a *Helicobacter pylori* binding substance comprising the terminal oligosaccharide sequence

$[\text{Hex1(A)}_{q1}(\text{NAc})_{r1}\alpha/\beta3]_s\text{Gal(NAc)}_{r2}\beta4\text{Glc(A)}_{q2}(\text{NAc})_{r3}$ , pharmaceutical or food compositions thereof and methods of making said pharmaceutical compositions.

Group II, claims 82 and 83, drawn to a method for the treatment or prevention of a condition due to or caused by the presence of *Helicobacter pylori* wherein a pharmaceutically effective amount of said *Helicobacter pylori* binding substance is administered to a subject in need of such treatment.

Group III, claim 78, drawn to a *Helicobacter pylori* binding substance bound to an oligovalent or a polyvalent carrier.

The Examiner asserts that the groups listed above do not relate to a single general inventive concept because under PCT Rule 13.2, they lack the same or corresponding special technical feature. For instance, the Examiner asserts that the common feature is known in the art. However, Applicants respectfully submit that the isoglobotriose  $\text{Gal}\alpha3\text{Gal}\beta4\text{Glc}\beta\text{Cer}$  of

Angström et al. is not an analog or derivative of the present substances, because the present substances contain disaccharide core comprising GalNAc instead of Gal and/or GlcA instead of Glc. It was shown in Angström et al. that the activity of the isogloboside was based on the ceramide structure at the reducing end. Therefore, the applicants are of the opinion that a skilled artisan would not consider the isogloboside of Angström et al. as an analogue or derivative of the present oligosaccharide structures as both derivatization by specific ceramide and then complex changes to the oligosaccharide structure would be needed until the same function would be achieved, i.e. the binding activity to *Helicobacter pylori*.

The Examiner further challenges the unity of the invention based on Jacquinet et al. which describes a chondroitin type oligosaccharide. However, Jacquinet et al. do not indicate *H. pylori* binding of the substance. It should be noted that the present invention is particularly directed to *H. pylori* binding substances.

The applicants are of the opinion that the current grouping of the inventions in the Unity of Invention Rejection does not reflect the common inventive concept of the claims. The common special technical feature of the invention is the ability of the present substances to bind to *Helicobacter pylori*. This concept thus covers at least the following embodiments: method of binding to *H. pylori* with a substance of the invention (new claim 84), analysis of *H. pylori* (claim 77), and methods of treatment or preventive treatment of *H. pylori* (claims 82-83).

Consistent with the above, Applicants hereby elect Group II, claims 82-83. However, Applicants submit that at least claims 82, 83, 84 and 77 should be searched and examined together.

The Examiner has also required Applicants to elect the following species A and D in the event that either Group I or Group II are elected.

- a) Species of *Helicobacter pylori* binding substance, for example, the substance whose chemical structure is, in its entirety, GalNAc $\beta$ 4Glc (disclosed on page 34, line 6), and
- b) Species of disease to be treated, for example gastric ulcer (disclosed in claim 75 and 83).

Applicants hereby elect these species as follows:

- a) GlcA $\beta$ 3GalNAc $\beta$ 4GlcA $\beta$ 3GalNAc
- b) gastric ulcer

It is Applicants understanding that the above elected species will serve as a starting point for search and examination purposes only. Upon indication of allowable subject matter the Examiner must expand the search to include other non-elected species with the intent of finding the generic claim ultimately allowable.

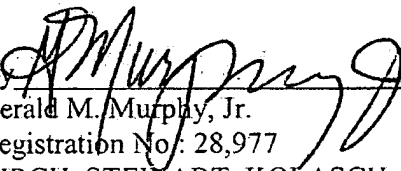
In view of the above, favorable action on the merits is respectfully solicited.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Craig A. McRobbie, Registration No 42,874 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to our Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under § 1.17; particularly, extension of time fees.

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Respectfully submitted,

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